

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated December 12, 2007 has been received and its contents carefully reviewed.

Claims 1, 2, 4-9 and 12-28 are pending in the present application, of which claims 6, 8, 16 and 21-28 are withdrawn as the result of an earlier restriction requirement. Reexamination and reconsideration of the pending claims is respectfully requested.

In the Office Action, claims 1, 2, 4, 5, 7, 9, 11-14 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Oh et al. (U.S. Patent No. 6,130,729) in view of Liu et al. (U.S. Patent No. 6,573,965), Von Gutfeld et al. (U.S. Patent No. 6,055,035), Kishimoto et al. (U.S. Patent No. 6,515,718) and Lien (U.S. Patent No. 5,907,380); claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Oh et al. in view of Liu et al., Von Gutfeld et al. and Tanaka et al. (U.S. Patent No. 6,603,528); and claims 17-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Oh et al. in view of Liu et al., Von Gutfeld et al. and Kim et al. (U.S. Patent No. 6,100,953).

The rejection of claims 1, 2, 4, 5, 7, 9, 11-14 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Oh et al. in view of Liu et al., Von Gutfeld et al., Kishimoto et al. and Lien is respectfully traversed and reconsideration is requested.

Claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example, "...dispensing liquid crystal on the first substrate formed no dielectric frame, wherein the dispensed liquid crystal is uniformly distributed on the first substrate prior to attaching the first and substrates to each other; wherein the second height of the sealant structure is higher than the first height of the dielectric frame, a height difference between the first height and the second height is more than 1 μ m in order to prevent the generation of bubbles in the liquid crystal, and the height difference between the sealant structure and dielectric frame allows the dispensed liquid crystal to be uniformly distributed between the first substrate and the second substrate." None of the cited references, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicant

respectfully submits that claim 1 and claims 2, 4, 5, 7, 9, 11-14 and 20, which depend therefrom, are allowable over the cited references.

The Examiner combines five references to reject claim 1. In particular, Liu et al. teaches bumps 311 and 409 on both substrates but recites that a cell gap of liquid crystal is not greater than the sum of the heights of two standing bumps on the upper and lower substrate respectively in col. 5, lines 32-35. Kishimoto et al. discloses that a thickness of the dielectric structure 120 should be determined in consideration of the relative dielectric constants of the respective components in col. 18, lines 21-23. Therefore, although combining Liu et al. and Kishimoto et al., the combination does not suggest or teach the feature of “wherein the second height of the sealant structure is higher than the first height of the dielectric frame, a height difference between the first height and the second height is more than 1 μ m in order to prevent the generation of bubble in liquid crystal” as claimed invention. Specially, none of the cited reference, singly or in combination, teaches or suggests the feature of “a height difference between the first height and the second height is more than 1 μ m in order to prevent the generation of bubbles in the liquid crystal” as claimed invention.

Also, none of the cited references, singly or in combination, teaches or suggests the feature of “dispensing liquid crystal on the first substrate formed no dielectric frame, wherein the dispensed liquid crystal is uniformly distributed on the first substrate prior to attaching the first and substrates to each other” as claimed invention. This feature is supported by paragraph [0051] and FIG. 4 of original specification.

In addition , the Examiner cites Kishimoto et al. as teaching the aforementioned features recited in claim 1, stating on page 8 of the Office Action that “Kishimoto discloses the motivation to optimize the height of a dielectric structure is to account for the relative dielectric constants of the respective components... the height is made sufficient to achieve the desired dielectric effect given the relative dielectric strength of the material used.”

As previously argued, assuming *arguendo* that Kishimoto et al. may teach a method for optimizing the height of a dielectric structure, it does not disclose or suggest the height relationship between the sealant structure and the dielectric frame in order to prevent the generation of bubbles in the liquid crystal in an LCD device, which is required to establish a *prima facie* case of obviousness under 35 U.S.C. § 103. In the present application, a height

difference between the sealant structure and the dielectric frame is more than 1 μ m in order to prevent the generation of bubbles in the liquid crystal of the LCD device (see TABLE 1 of the present application). If the Examiner takes an Official Notice for the aforementioned features recited in claim 1, Applicant respectfully traverses this Official Notice and requests for a documentary evidence (see MPEP §2144.03(c)).

The rejection of claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Oh et al. in view of Liu et al., Von Gutfeld et al. and Tanaka et al. is respectfully traversed and reconsideration is requested. Because Tanaka et al. fails to cure the deficient teaching of Oh et al., Liu et al. and Von Gutfeld et al., claim 15 is allowable over the cited references.

The rejection of claims 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Oh et al. in view of Liu et al., Von Gutfeld et al. and Kim et al. is respectfully traversed and reconsideration is requested. Because Kim et al. fails to cure the deficient teaching of Oh et al., Liu et al. and Von Gutfeld et al., claims 17-19 are allowable over the cited references.

Applicant believes the application is in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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